





# ONDCP

## Drug Policy Information Clearinghouse

# FACT SHEET

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# Methadone

## Background Information

Methadone is a rigorously well-tested medication that is safe and efficacious for the treatment of narcotic withdrawal and dependence. For more than 30 years this synthetic narcotic has been used to treat opioid addiction. Heroin releases an excess of dopamine in the body and causes users to need an opiate continuously occupying the opioid receptor in the brain. Methadone occupies this receptor and is the stabilizing factor that permits addicts on methadone to change their behavior and to discontinue heroin use.

Taken orally once a day, methadone suppresses narcotic withdrawal for between 24 and 36 hours. Because methadone is effective in eliminating withdrawal symptoms, it is used in detoxifying opiate addicts. It is, however, only effective in cases of addiction to heroin, morphine, and other opioid drugs, and it is not an effective treatment for other drugs of abuse. Methadone reduces the cravings associated with heroin use and blocks the high from heroin, but it does not provide the euphoric rush. Consequently, methadone patients do not experience the extreme highs and lows that result from the waxing and waning of heroin in blood levels. Ultimately, the patient remains physically dependent on the opioid, but is freed from the uncontrolled, compulsive, and disruptive behavior seen in heroin addicts.

Withdrawal from methadone is much slower than that from heroin. As a result, it is possible to maintain an addict on methadone without harsh side effects. Many MMT patients require continuous treatment, sometimes over a period of years.

Methadone maintenance treatment provides the heroin addict with individualized health care and medically prescribed methadone to relieve withdrawal

symptoms, reduces the opiate craving, and brings about a biochemical balance in the body. Important elements in heroin treatment include comprehensive social and rehabilitation services.

## Availability of Treatment

About 20% of the estimated 810,000 heroin addicts in the United States receive MMT (American Methadone Treatment Association, 1999). At present, the operating practices of clinics and hospitals are bound by Federal regulations that restrict the use and availability of methadone. These regulations are explicitly stated in detailed protocols established by the U.S. Food and Drug Administration (FDA). Additionally, most States have laws that control and closely monitor the distribution of this medication.

In July 1999 the U.S. Department of Health and Human Services released a Notice of Proposed Rulemaking (NPRM) for the use of methadone. For the first time in more than 30 years, the NPRM proposes that this medication take its rightful place as a clinical tool in the treatment of the heroin addict. Instead of its use being mandated by regulations, programs will establish quality assurance guidelines and have to be accredited. The proposed new system will allow greater flexibility by the treating physician and ensure appropriate clinical management of the patient's needs. This proposed change in policy would eliminate most of the current regulations and allow greater clinical discretion for treatment by the physician. Accreditation establishes a clinical standard of care for the treatment of medical conditions. In the foreseeable future, clinic and hospital programs would be accredited by a national and/or State accrediting body. Responsibility for preventing the diversion of methadone to illicit use will remain with the Drug Enforcement Administration.

## Is It Safe?

Research and clinical studies suggest that long-term MMT is medically safe (COMPA, 1997). When methadone is taken under medical supervision, long-term maintenance causes no adverse effects to the heart, lungs, liver, kidneys, bones, blood, brain, or other vital body organs. Methadone produces no serious side effects, although some patients experience minor symptoms such as constipation, water retention, drowsiness, skin rash, excessive sweating, and changes in libido. Once methadone dosage is adjusted and stabilized or tolerance increases, these symptoms usually subside.

Methadone is a legal medication produced by licensed and approved pharmaceutical companies using quality control standards. Under a physician's supervision, it is administered orally on a daily basis with strict program conditions and guidelines. Methadone does not impair cognitive functions. It has no adverse effects on mental capability, intelligence, or employability. It is not sedating or intoxicating, nor does it interfere with ordinary activities such as driving a car or operating machinery. Patients are able to feel pain and experience emotional reactions. Most importantly, methadone relieves the craving associated with opiate addiction. For methadone patients, typical street doses of heroin are ineffective at producing euphoria, making the use of heroin less desirable.

## Benefits

Evidence shows that continuous MMT is associated with several other benefits.

- ◆ MMT costs about \$13 per day and is considered a cost-effective alternative to incarceration (Office of National Drug Control Policy, 1998a).
- ◆ MMT has a benefit-cost ratio of 4:1, meaning \$4 in economic benefit accrues for every \$1 spent on MMT (COMPA, 1997).
- ◆ MMT has a significant effect on the spread of HIV/AIDS infection, hepatitis B and C, tuberculosis, and sexually transmitted diseases (COMPA, 1997). Heroin users are known to share needles and participate in at-risk sexual activity and prostitution, which are significant factors in the spread of many diseases. Research suggests that MMT significantly decreases the rate of HIV infection for those patients participating in MMT programs (Firshein, 1998).

MMT allows patients to be free of heroin addiction. The National Institute on Drug Abuse found that, among outpatients receiving MMT, weekly heroin use

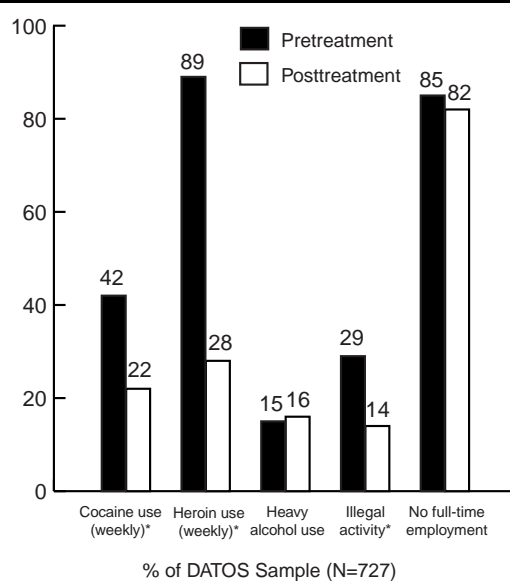
decreased by 69%. This decrease in use allows for the individual's health and productivity to improve (Office of National Drug Control Policy, 1998a). Patients were no longer required to live a life of crime to support their habit, and criminal activity decreased by 52% among these patients. Full-time employment increased by 24%. In a 1994 study of drug treatment in California, researchers found that rates of illegal drug use, criminal activity, and hospitalization were lower for MMT patients than for addicts in any other type of drug treatment program.

The Drug Abuse Treatment Outcome Study (DATOS) conducted an outpatient methadone treatment (OMT) evaluation examining the long-term effects of MMT (Hubbard et al., 1997). The pretreatment problems consisted of weekly heroin use, no full-time employment, and illegal activity. Results of the 1-year follow-up showed a decrease in the number of weekly heroin users and a reduction in illegal activity after OMT. There was no significant change in unemployment rates.

## A Review

MMT is one of the most monitored and regulated medical treatments in the United States. Despite the longstanding efficacy of MMT, only 20% of heroin addicts in the United States are currently in treatment. The National Institute of Health Consensus Development Conference on Effective Medical Treatment of Heroin Addiction concluded that heroin addiction is a medical disorder that can be effectively treated in

**Figure 1. Outpatient methadone treatment (OMT): pretreatment and posttreatment statistics**



Source: Hubbard, R.L., et al., 1997.

MMT programs. The Consensus panel recommended expanding access to MMT by increasing funding and minimizing Federal and State regulations. Further research must be conducted on factors leading to heroin use and the differences among various users and their ability to end opiate addiction before the demand for heroin addiction treatment can be effectively met by increased MMT availability.

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